



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

DEPARTMENT OF GEOGRAPHY.

NORTHWEST AMERICA.*

THE Northwest portion of the American Continent has been of late, and is now attracting much attention. The history of this region, though meagre, is interesting. The coast was explored in the latter part of the 18th century by English, American, and Spanish navigators. A Boston shipmaster gave name to the Columbia River and Gray's Harbor; a Spanish navigator is memorized in the Straits of De Fuca, and a Briton in Vancouver's Island.

About the same time, or shortly after these events, the Northwest Company and the Hudson's Bay Company pushed their explorations to the frozen ocean, and to the Pacific, in about lat. 52° N., and established trading posts all over this extensive territory. Two centuries had already been completed since the Jesuit Missionaries from New France had penetrated to the upper lakes and the Mississippi.

The explorations of Lewis and Clark, in the early part of the present century, made known to the world the two great rivers across the continent—the Missouri and the Columbia, and the general character of their basins. They were soon followed by the American trappers, who planted establishments both on this side and west of the Rocky Mountains.

The efforts of John Jacob Astor to found a great trading establishment on the Columbia, and to make tributary to it the whole western slope, by a system of posts, through misfortunes of various kinds failed; and the whole of that country, as well as the country northward to Hudson's Bay, and stretching from the Pacific to the Great Lakes, came under the control of a foreign company. Thus, so far as concerned the agencies at work to develop the country, the American people had control simply of the

portion east of the Rocky Mountains; all west of that range was maintained under another jurisdiction, solely as a hunting ground.

The treaty of 1846 established the line (lat. 49° N.) between the possessions of the United States and British America. In the same year, the wagon of the American pioneer scaled the mountains which had hitherto presented a formidable barrier against westward progress, and before its close, American citizens had carved out their homes on the shores of the western ocean.

Time rolled on—California and its vast mineral resources became known. Oregon, which had been healthfully and rapidly settling, became stationary, and many of the settlers went to California to dig for gold; and to the same attractive region the whole overland emigration was diverted. This condition of matters, however, was not of long duration. Gold was also discovered in southern Oregon, and large numbers of miners found remunerative employment; the tide of population again rose, and ultimately, in 1853, the northern portion of the territory was erected into a separate government, under the title of WASHINGTON.

Within the last four or five years rumors had spread abroad that gold existed over a large area in Washington Territory, and in the British Possessions to the north. The fact has now been verified, and the extent and richness of the diggings been established beyond doubt.

The present, therefore, appears to be an opportune moment, for presenting a careful consideration of the geography and resources of the regions involved in this enquiry and to indicate what may be the measure of their future development and destiny.

Looking on the map of North America, attention is arrested by the great mountain chain which traverses the continent north and south, between the Mississippi and the Pacific Ocean, and from which flow waters to either ocean. Great rivers having long distant courses reach the Gulf of Mexico, Hudson's Bay, the Frozen Ocean, and the Pacific Ocean. The upper tributaries of two of these—the Missouri and

* "Address on the "Northwest" before the American Geographical and Statistical Society, delivered at New York, December 2d, 1858, by Hon. ISAAC I. STEVENS, Member of Congress from Washington Territory." (Abridged.)

the Columbia—interlock in the very heart of the Rocky Mountains. The head of steam-navigation on the first is found at Fort Benton, 2,415 miles above St. Louis, to which point the Missouri is navigated by steamers carrying 150 tons of freight; and the navigable head of the great southern constituent of the Columbia is found at the confluence of the Palouse. The distance intervening between these navigable waters is only 450 miles—a distance when compared with the breadth of the continent, inconsiderable and easy to be overcome.

There are other streams second only in importance to the Missouri. The two branches of the Saskatchewan, that have their sources also in the Rocky Mountains, north of the Missouri, stretch a great distance eastward to Lake Winnipeg, and find their way northward into Hudson's Bay. They connect also with the main Columbia itself, affording transit for passengers and freight several months of the year; and thus the Columbia River and the two branches of the Saskatchewan have from the first been the great lines of travel of the Hudson's Bay Company's servants.

The Mississippi has also its source in this region, furnishing with its tributaries a long course of waters navigable by steamers, and affording a very close connection both with Lake Superior and the Red River of the North; and the Red River flowing northward, and in a direction opposite to that of the Mississippi, is also navigable within our own borders several hundred miles for steamers, and makes connection between our own system of rivers and those which flow into Lake Winnipeg and Hudson's Bay.

But the great feature of the Northern portion of the American continent is the water-line of the Great Lakes, which stretches more than half way across from the Atlantic to the Pacific. This fact is of deep significance, when we consider that vessels, without breaking bulk can pass thence to the Ocean, either by the Canadian canals and the St. Lawrence, or by the New York canals and the Hudson.

Thus we find that the country under exami-

nation is one of great natural water-lines across the continent—the Great Lakes, the Mississippi, the Red River, the Missouri, the Saskatchewan and the Columbia. Southward of this region the deficiency of navigable streams is remarkable. After leaving the Missouri, no navigation is again found until the Sierra Nevada has been crossed, and the lower valley of the Sacramento attained.

The mountain chains which characterize this country are the Sierra Nevada of California, and the Cascade Mountains of Oregon and Washington, stretching far to the northward. The Rocky Mountain chain has a vast extension in the parallel of San Francisco and Washington City and to the northward of the South Pass, and then diminishes in breadth still further north until it passes beyond the 49th parallel. Again there are, intermediate between these great ranges, many subsidiary chains which need not here be more specifically referred to.

Another peculiarity of the country of the Missouri and the Columbia is, that on the eastern slope the prairie region extends to the very base of the Rocky Mountains. From Fort Union, along the valley of Milk River to Fort Benton, there are no upheavals with the single exception of the Three Buttes, 3,000 feet high, which rise out of the prairie just under the 40th parallel, and about 100 miles eastward of the great chain.

The Rocky Mountain region, between lat. 46° and 49° N., is also essentially a country of prairies. West of the Bitter Root chain, a great plain stretches to the Cascade Mountains, and from the 48th to below the 46th parallel, this prairie region is for the most part well-watered, well-grassed, and furnishes a large portion of arable land.

There still remain to be considered the two great ports on the Pacific coast, San Francisco and Puget's Sound. San Francisco is the great port of California, and must ever be a leading key-point of commerce. But Puget's Sound is admitted by all naval and military men who have ever visited its waters, to be the most

remarkable roadstead on the shores of any ocean. It has 1,600 miles of shore-line, and a great number of land-locked, commodious, and defensible harbors. It can be entered by any wind, is scarcely ever obstructed by fog, and is the nearest point to the great ports of Asia of any harbor on our western coast.

Within the last twenty years this country has been considered as an inhospitable, cold and barren region, fit only for Indians, wild beasts, and hunters. Observation, however, has not verified this climatic character; but on the contrary, it has declared that the climate of Puget's Sound is milder than that of New York. Ice is never formed on its surface; nor snow found on its shores for more than a few days at a time; and the merchants of San Francisco have to go north to the Russian settlements to obtain their supplies office.

The material resources of Puget's Sound and the country watered by the Columbia and Willamette, are literally inexhaustible. The whole country west of the Cascades has for the most part a fertile soil, a temperature so mild through the winter that cattle do not require fodder, and seed can be sown from September to March; and then the summers are glorious. The forests on Puget's Sound are a great source of wealth. Spars are not only sent to Asia, the Sandwich Islands, and Australia, but to the navies of England and France, while immense quantities of sawed lumber are sent to both domestic and foreign ports; and yet the lumber and spar business is in its infancy. Within one mile of the shores of the Sound there is more timber than can be found on all the tributaries of all the waters of Maine.

On the coast, from Columbia to Vancouver's Island, there are extensive fisheries of cod and halibut; and this portion of the coast also abounds in whales. On the east shore of the Sound, and on the Straits of De Fuca, there is coal of excellent quality, and well adapted for steamers. The country also abounds in water-power near the navigable waters.

From the Cascade Mountains to the Rocky Mountains, there is a vast pastoral and agricul-

tural region. The Yakima country is a good grazing country. In the portion immediately north of the Columbia, there is a single tract of 2,000 square miles of arable land. The Walla-Walla valley is a delightful region, its streams lined with cottonwood, the neighboring mountain spurs covered with pine; and nearly the whole country between these mountains and Snake River is arable, and one-half adapted for small farms. This valley, or rather re-entering of Snake River, is the great key of the interior, and can subsist a farming population of 100,000 souls.

The country west of the Bitter Root, and north of Snake River, and thence extending westward nearly to the Palouse, has a fertile soil adapted to wheat and cereals generally. As regards the portion west of the meridian of the Palouse, it is somewhat affected by drought, and is more of a grazing than an agricultural country. Nevertheless, on the line of the Columbia, on the shores of many of the streams and lakes, and in many of the intervening swales and valleys, tracts are found where there is abundance of arable land.

The country north of the Spokane to lat. 49° N. is wooded, and a very considerable portion is arable. The Bitter Root Mountains are covered with heavy timber—pine and fir, and larch and cedar. The Flathead country east of the Bitter Root, and along the eastern slope of the Rocky Mountains, has an area of arable land estimated at 12,000 square miles; and the country stretching from the Rocky Mountains to the rivers running to the Gulf of Mexico and Hudson's Bay, watered by the Upper Missouri, the Saskatchewan, and Red River of the North is adapted for the most part to settlement and civilization.

The time will come, indeed, when there will be agricultural settlements throughout the whole extent of this country, from the Mississippi to the Pacific, simply excepting limited extents along the higher parts of the mountain chains, and in some of the prairie regions. As illustrative of the capacity of the country it may be stated that the Indians east of the Cas-

cares are rich in horses and cattle, and that their general wealth is not exceeded by that of any civilized community on this continent. The Spokane and Flathead nations range the winter long without dried fodder; and there is no finer beef than that of the Walla-Walla country. At Fort Benton and Fort Union horses and cattle are maintained through the winter on the green herbage of the country.

Towards the advancement of this region much has already been effected. The country has been scientifically explored; a commencement has been made in surveying the public lands; some progress has been made in negotiating treaties with the Indian tribes, and the Indians themselves have recently been shown a memorable instance of the power and determination of the government of the United States to protect the lives of its citizens.

The discovery of gold in British Columbia has developed, on the part of the British people, an earnest determination to establish communication across the continent.

The United States government has already taken the initiative towards the same purpose; and here the two great powers enter upon the race for supremacy. The question is thus resolved into the practicability of establishing lines of travel from the water-line of the Great Lakes to Puget's Sound, that port which is the nearest of all American ports to Asia. It is not whether such an undertaking will inure to the benefit of specific localities; but whether this is not a project upon which rests the question as to whether the great carrying trade from Asia to Europe shall pass over American or British soil; or whether upon the success of this undertaking does not rest the question, whether the key of the North Pacific shall be in the hands of the American people, or in the hands of the subjects of a foreign power. If it be practicable to build a Railroad and establish this route, it is the duty of the American government to aid in the undertaking. It ceases, indeed, to be sectional and geographical, and rises into a noble and elevated nationality to which all hearts should yield a willing assent.

It is alleged that the severity of the climate and the excessive depth of the snows are insuperable objections against the construction of a continental railroad, along what is termed the northern route, and this even by men of intelligence, and in official reports. If these allegations were true, then the route as proposed would be fundamentally impossible; but let facts speak for themselves. In an examination of the country by the parties under Gov. Stevens in 1853, '54 and '55, the passes of the Rocky Mountains, Hell Gate, Northern Little Blackfoot, and Cadot's Pass, were crossed in December, January, February, and March, 1853-4, and in no one of these passes did they find more than 15 inches of snow. That same winter the party that crossed the Rocky Mountains in January, went down Clark's Fork in February, and the sole trouble met with was where the snow was deep enough to cover up the grass (they went on horseback); but in these cases it was in the wooded portions, and 30 inches was the greatest depth. When they again reached the prairies they found it but one foot deep; and every man of science knows what influence forests have in preserving the depth of the snows, and how it disappears on the cleared lands. There is one point alone on all the route about which our information is deficient, and that is the crossing of the Cascade Mountains to Puget's Sound; but it is the opinion of Gov. Stevens, that even here no serious obstruction occurs. The snow was but six feet for a short distance in the latter part of January, 1856. At Fort Benton and Fort Campbell, ever since their establishment, some 25 years ago, the fur companies have taken their goods to their winter-trading posts on the Milk and Marias Rivers in wagons, there not being snow enough for sleds. Will then the snows of this route, which do not prevent the Indians and traders from traveling, furnish any difficulties which will render it unusually troublesome for the passage of railroad cars?

With regard to the question of coldness, it is alleged, that it is so intense on the route of the 47th parallel, that it will be impracticable for

a large portion of the year to work men in the construction of the road, or to run cars for many days in the winter. Unfortunately for these opinions, we have observations on these points. And we have already great lines of railroad in operation over tracts of country as cold, and even colder than the route from Fort Benton to the Pacific. The mean winter temperature at Fort Benton, in 1853-4, was $25^{\circ} 38$; the average at Montreal on the Grand Trunk Railway for the same year was $13^{\circ} 22$, and at Quebec $11^{\circ} 03$. On the great Russian Railroad, the comparison is very similar; the mean winter temperature at Moscow is $15^{\circ} 20$, and at St. Petersburg $8^{\circ} 10$. At Fort Snelling, in 1853-4, it was $11^{\circ} 64$, and the mean of 35 winters was $16^{\circ} 10$. Thus, in the winter of 1853-4, an unusually cold winter, Fort Benton was 12° warmer than Montreal, 14° warmer than Quebec and Fort Snelling, 10° warmer than Moscow, and 7° warmer than St. Petersburg. In the Bitter Root Valley, the average temperature in the winter of 1853-4, was $24^{\circ} 90$, and in 1854-5 it was $30^{\circ} 30$, and the greatest cold at Cantonment Stevens was 29° . At Fort Snelling, in the same winter, it was 36° , at Montreal it was 34° , and at Quebec 29° below zero. Thus, on the proposed northern route the greatest cold is not equal to the greatest cold on the route of the Grand Trunk Railway; and the same fact is unquestionably true of the great artery of Russia. Taking the number of cold days, when the average temperature was below zero, we find 12 at Fort Benton, 10 at Ct. Stevens, 18 at Fort Snelling, 18 at Montreal, and 23 days at Quebec; and again taking the number of warm days, when the average temperature was above freezing point, we find at Fort Benton 43 out of 90 days, and at Ct. Stevens 32, against only 6 out of 90 at Fort Snelling, 5 at Quebec, 8 at Montreal, and 18 at Albany—all in the winter of 1853-4. But it may be objected that the temperature of Fort Benton and Ct. Stevens is not the measure of the temperature of the intermediate rocky range through which the route passes. Fortunately the party referred to in connection with

the depth of snow, made observations of temperature on the route, and it has been found by careful comparison that the passage was made during the extreme cold weather of that winter, and the temperatures observed therefore indicate the extreme cold of the pass, and not the usual cold. The mean temperature in the pass from 12th to 23d January, twelve days, was $10^{\circ} 10$. At Ct. Stevens the mean was $5^{\circ} 20$, and at Fort Benton $7^{\circ} 30$. The greatest mean cold of any day observed in the pass was 22° , against 24° at Fort Snelling, and a still lower figure at Pembina.

That the winter of 1853-54 was unusually cold in the mountain region is shown in the fact that in the Bitter Root Valley, the thermometer never went down to zero in the winter of 1854-5, whilst it fell as low as 29° in that of 1853-54. The average mean temperature of this valley in the winters of 1853-54 was $24^{\circ} 90$, whereas in 1854-55 it was $30^{\circ} 30$. The same general result, determined by observation, as regards the temperature of the pass, would be arrived at by using the formula that every 1,000 feet in altitude would depress the temperature 3° . Now when six miles of the pass is more than 5,000 feet above the sea, the greatest altitude being but 6,044 feet, and the average of the pass is but about 4,000. The pass, considering simply 165 miles of the distance, where the altitude exceeds 3,000 feet, will be only from 1° to 10° colder than Fort Benton, and except the six miles above mentioned, only from 1° to 7° colder. These facts, drawn from reliable records, ought to settle forever the question which has been raised prejudicial to this route—that it will be obstructed by snow and cold weather. So successful has been the great railroad from Moscow to St. Petersburg, that they are now pushing railroads in all directions, running them into regions truly Siberian; and the Canadian railroads are being extended westward utterly regardless of these objections, experience having shown their futility. It may, therefore, be assumed, that this northern route is entirely practicable as far as regards snow and cold; and that there can be

no greater obstacles to its construction and working than have been easily overcome in other portions of America, and in northern Europe.

We will now pass on to a more detailed view of the characteristics of the route and its relation to other routes. The distance from St. Paul and the western end of Lake Superior to the shores of Puget's Sound, is 1,800 miles. It is the shortest equated railroad line across the Continent, whether the eastern terminus be on the western border of the States, or on the Mississippi, or on Lake Superior, and it is much the shortest of all the surveyed routes, except those from San Diego and San Pedro, on the line of the 32d parallel. In connection either with the line of the great lakes and its system of canals and rivers, or the great railroad lines of the Canadas and the United States, it furnishes the most direct and cheapest route on the continent for freights and passengers from Asia to Europe and back again, and also between Asia and the Northwest, our West, our centre, our East, and the great seats of commerce on the Atlantic coast. The lineal distance on the route of the 32d parallel to the Mississippi, are 1,748 and 1,683, against 1,747 and 1,764, the lineal distances of Vancouver and Seattle from St. Paul, and against 1,733 and 1,750, the lineal distances from Superior City; and starting from the western border of the States, the lineal distances on the route of the 32d parallel are 1,598 and 1,533 miles, against 1,527 and 1,546 miles, the lineal distances from Breckenridge to Vancouver and Seattle.

The following table from official reports shows the distances on an air-line between the termini of the several explored practicable routes across the Continent, the lineal distances, the sums of ascent and descent, the equated distances in miles, the estimated cost, the extent of cultivable country, the extent of country which is less than 1,000 feet above the sea, and the extent varying from 1,000 to 9,000 feet, and the elevation of the highest pass on each of the routes which have been described in the preceding pages:

Routes.	Miles.	Distance by Air Line.	Miles.	Distance by proposed route.	Feet.	Sum of Ascents and Descents.	Miles.	Length of level route of equal w'rk'g exp'nces.	Doll'rs.	Compa'tive cost of routes in millions of dollars.	Miles.	Route through cultivable country.	Miles.	Route through land generally uncultivable.	Miles.	50 and 1,000 feet.	Miles.	1,000 & 2,000 feet.	Miles.	2,000 & 3,000 feet.	Miles.	3,000 & 4,000 feet.	Miles.	4,000 & 5,000 feet.	Miles.	5,000 & 6,000 feet.	Miles.	6,000 & 9,000 feet.	Feet.	Altitude above the sea, of the highest point on the route.	Feet.	Tunnels at an elevation of
Near 47th & 49th parallels,	1,247	1,544	21,787	1,958	96	1,224	320	130	433	733	180	62	6	...	6,044	5,195																
—Breckenridge to Seattle	1,213	1,527	17,587	1,961	94	1,207	320	243	391	648	178	61	6	...	6,044	5,195																
—Breckenridge to Vancouver	1,213	1,527	17,587	1,961	94	1,207	320	243	391	648	178	61	6	...	6,044	5,195																
Near 41st and 42d parallels,	1,410	2,032	29,120	2,583	116	632	1,400	220	170	210	160	590	285	397	8,373	...																
—Council Bluffs via South Pass to Bendish	1,550	2,096	48,521	3,015	106	646	1,450	565	290	261	236	181	295	248	7,550	...																
Near 36th parallel	1,380	1,820	48,962	2,745	92	420	1,400	354	292	226	210	185	295	248	7,550	4,179																
—Ft. Smith to S. Francisco	1,630	2,024	38,200	2,747	90	634	1,190	593	347	120	342	271	50	...	5,717	...																
—Fort Smith to San Pedro	1,400	1,598	30,181	2,169	68	408	1,190	478	337	120	342	271	50	...	5,717	...																
Near 32d parallel,	1,360	1,533	33,454	2,167	68	374	1,159	420	305	125	362	271	50	...	5,717	...																
—Fulton to San Francisco	1,630	2,024	38,200	2,747	90	634	1,190	593	347	120	342	271	50	...	5,717	...																
—Fulton to San Pedro	1,400	1,598	30,181	2,169	68	408	1,190	478	337	120	342	271	50	...	5,717	...																
—Fulton to San Diego	1,360	1,533	33,454	2,167	68	374	1,159	420	305	125	362	271	50	...	5,717	...																

In the above table Breckenridge, on the western border of Minnesota, is assumed as the starting point of the northern route—a point which is a terminus of a railroad now actually

under construction by aid of a Congressional grant of land; and Council Bluffs, Fort Smith, and Fulton as the starting points of the routes near the 41st, 35th, and 32d parallels, respectively.

The following tables makes the eastern termini of the northern route at Superior City and St. Paul, and of the other routes at Rock Island, Memphis and Gaines' Landing on the Mississippi River:

Routes.	Distances by proposed line.	Sum of Ascents and Descents.	Level route of equal working expense.
	Miles.	Feet.	Miles.
Near 47th & 49th parallels, —Superior City to Seattle..	1,750	21,787	2,164
— " " to Vancouver ..	1,733	17,587	2,067
—St. Paul to Seattle	1,764	21,787	2,178
— " " " Vancouver	1,747	17,587	2,081
Near 41st and 42d parallels, —Rock Island via Council Bluffs and South Pass, to Benicia	2,299	29,387	2,853
Near 35th parallel, —Memphis via Fort Smith, to San Francisco	2,366	48,791	3,285
—Memphis to San Pedro ..	2,090	49,132	3,015
Near 35th parallel, —Gaines via Fulton, to San Francisco	2,174	38,350	2,897
—Gaines " to San Pedro ..	1,748	30,331	2,319
— " " to San Diego	1,683	33,604	2,317

"If I am met," says Gov. Stevens, "with the objection that the Arkansas, Mississippi and Missouri are navigable, and that the routes on the 42d, 35th and 32d parallels should be stopped short at navigable waters, then, for purposes of comparison, I say very well, we will stop the northern road at Fort Benton, at the head of steamboat navigation of the Missouri, which will give a result vastly in its favor. I am of opinion, however, that the Mississippi valley and the great lakes is the proper eastern base. Thus we find—the western terminus of the routes of the 42d, 35th and 32d parallels, being San Francisco—that the lineal length of the northern route is 549 miles shorter than that of the 42d parallel, 616 miles shorter than that of the 35th parallel, 424 miles shorter than that of the 32d parallel; and that, as re-

gards the equated distances, the northern line is 689 miles shorter than the line of the 42d parallel, 1,121 miles shorter than the line of the 35th parallel, and 733 miles shorter than the line of the 32d parallel. But, looking to the eastern terminus, where are you when you reach the Mississippi on the route of the 42d 35th and 32d parallels?

"You are on a great navigable river, from which you can supply the Mississippi valley. But how will you reach New York, Chicago, Portland, Boston, Philadelphia and Baltimore?

"Will you tranship on the Mississippi, and take your winding course by the Gulf of Mexico, or take the rail, and seek some of the intermediate water lines which stretch along the whole distance?

"Will you make use of the Ohio, and the railroads and canals of New York, Pennsylvania and Virginia? On the northern route we are on navigable waters; we are now ready to enter our ships and go to Europe, or to New York; or, arrived at Montreal, we can pass by rail to Portland. If we compare Chicago as a great lake port with Superior City, its distance from Puget's Sound on the northern route, via St. Paul's, is 317 miles shorter than its distance from Benicia via South pass.

The lineal distances from Seattle via Northern Route and St. Paul, and from Benicia via South Pass, Council Bluffs and St. Louis, to these several ports of the Atlantic and Gulf coast, will be as follows:

	Seattle, via St. Paul.	Benicia via St. Louis.	Differences in favor of Nor'n route
Portland	3,249	3,831	582
Boston ..	3,352	3,696	344
New York ..	3,126	3,546	420
Philadelphia ..	2,988	3,454	466
Baltimore ..	2,966	3,355	389
Washington ..	3,004	3,375	371
Charleston ..	3,328	3,445	117
Savannah ..	3,313	3,430	117
Mobile ..	3,030	3,147	117
New Orleans ..	3,115	3,232	117
Average	3,131	3,453	

"The distance from Benicia to St. Louis is 2,482 miles.

"Thus the average distance from Seattle, via St. Paul, to the principal ports of the Atlantic and Gulf, is 316 miles less than the average from Benicia, via St. Louis, to the same points. This saving of distance, via St. Paul, ranges from 117 miles, as in the case of New Orleans, to 582 miles, as in the case of Portland. If the equated distances were used, it would make an additional difference in favor of the northern route of 137 miles. Thus every seat of commerce on the coast is nearer to Puget's Sound by the northern route, than to the waters of San Francisco by the central route.

"I am, however, of the opinion that no single line of railroad is the proper American solution of the problem of continental communication.

"The northern route should not alone be patronized by the government. The mail service now in operation, and about to be put in operation, indicates three lines which should share the patronage of the government; but these few facts as to distances, and the known relations between water lines and railroad lines, must show you conclusively that on this northern must pass the great carrying trade from Asia to Europe, and from Europe to Asia; that on this northern route must pass Asiatic supplies for much the largest portion of our own country and the Canadas. It is most emphatically a national route; and if we do not establish it, the British people and government will establish one north of the 49th parallel, and then we shall find ourselves in the position of the people, from whose hands had passed the sceptre of Judah."

The following table gives the sailing distances from the principal ports of Asia to those of our western coast. From this it will be seen that the average distance from the ports of Asia to Seattle is 25 miles less than to Vancouver, 63 miles less than to San Francisco, 368 miles less than to San Diego, and 65 miles less than to Mazatlan. As regards the four ports—the

mouth of the Amoor, Shanghai, Canton and Calcutta, the average distances are respectively 54, 206, 532, and 1,212 miles less than to the other ports:

From	To Seattle.	Van- couver.	S.Fran- cisco.	San Diego.	Mazat- lan.
	Miles.	Miles.	Miles.	Miles.	Miles.
Amoor	3,850	3,895	4,110	4,520	5,390
Shanghai.....	5,140	5,215	5,430	5,830	6,700
Canton	5,900	5,975	6,140	6,550	7,380
Calcutta	8,730	8,805	8,970	9,380	10,210
Melbourne	7,280	7,205	6,930	6,990	7,125
Sandwich Isl'd	2,380	2,305	2,050	2,190	2,535
Average....	5,542	5,567	5,605	5,910	6,607

If we look to European connections, the following table gives the distances from Liverpool, Havre and Bremen, European ports, to Halifax, St. Johns, Portland, Boston and New York, American ports:

From	To Halifax.	St. Johns.	Port- land.	Boston.	New York.
Liverpool	2,430	1,960	2,750	2,800	2,970
Havre	2,540	2,070	2,860	2,910	3,080
Bremen	3,080	2,610	3,400	3,450	3,620

There is a scheme on foot of a railroad communication from both Halifax and St. John's to Quebec. The distance from Halifax to Quebec will be 635 miles, and to Montreal 803 miles; and from St. John's to Quebec about the same distance—making the entire distance by railroad from western connections 511 miles shorter to Portland than to Halifax and St. Johns. This great increase of distance cannot compensate for the less ocean distance from the two British ports. We thus stand in this strong position—the great water line of the lakes and its system of canals and rivers has the shortest railroad connections with American ports both on the Pacific and Atlantic coasts, making Puget's Sound the great port for all seasons of the year, and Portland the winter port of the Canadas and the depot for the whole business which will pass over the rail. The natural inference is that the Northern route is not only an eligible one, but the most feasible of all the routes as yet projected or surveyed.